

THREE NEW MEALYBUG PARASITES OF THE
GENUS *ALLOTROPA* (HYMENOPTERA:
PLATYGASTERIDAE).

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The genus *Allotropa* Foerster has had little study although certain species appear to be of considerable importance in the control of injurious mealybugs. All species of which the hosts are known are mealybug parasites. They are small insects, none of the species known to me measuring more than one millimeter in length. Only about a dozen species have been described. I suspect, however, from the frequency with which undescribed species have come to my attention in recent years and in view of the occurrence of the genus in all the major zoogeographical regions, that the group is a fairly large one. If that is true, much critical study will be required for the development of workable keys, especially keys to aid in the recognition of the females. Thus far it has not been very difficult to distinguish the known species in the male sex because of good characters furnished by the antennae, but the female antennae of the known species are very similar and for identification of this sex close attention has had to be given to small differences in structure, sculpture, and color.

Three apparently undescribed species for which names are wanted are described here.

The illustrations were prepared by Arthur D. Cushman, U. S. Bureau of Entomology and Plant Quarantine.

Allotropa citri n. sp.

In its smooth and polished scutellum and somewhat convex face this species resembles *convexifrons* Mues., but it is immediately distinguished by its clear hyaline wings, dark femora, and thicker, dorsally more convex, flagellar segments of the male antennae.

Male.—Length about 0.8 mm. Head barely wider than thorax; face evenly, finely reticulate or coriaceous; vertex shagreened; antenna as in Fig. F, the longer bristles of the basal flagellar segments not in clusters and relatively short, flagellar segments 2 to 6 each barely twice as long as high. Mesoscutum finely shagreened, shining; scutellum smooth and polished, rather flat; propodeum and metapleuron densely covered with long, silky hairs.

Black; antennae piceous, lighter below; legs piceous to black, with coxae not as dark as femora, and with all trochanters, all tibiae basally and the fore tarsi, yellowish.

Female.—Stouter than the male; antenna as shown in Fig. E; mesoscutum more strongly sculptured and less shining than in the male. Scape, pedicel and basal three segments of antennal flagellum yellow, the club blackish; hind coxae yellow; tibiae yellow, the posterior pair and sometimes the middle pair a little infuscated; all tarsi pale except for apical segment of each.

Type locality.—"South China."

Type.—U. S. National Museum No. 62212.

Host.—*Planococcus citri* (Risso).

Described from 29 males and 25 females reared from *P. citri* in propagations laboratories at Albany and Riverside, California. The stock had been obtained from South China by J. Linsley Gressitt.

Allotropia scutellata n. sp.

This species may be rather easily distinguished from the other described New World species by the combination of a strongly convex, closely sculptured and dull scutellum with a smooth and polished face and yellow legs.

Male.—Length nearly 1 mm. Head as wide as thorax; face mostly impunctate and highly polished, with only a narrow transverse strip above insertion of antennae, and sometimes small, indefinitely defined areas adjacent to eyes, finely reticulate; cheeks coriaceous and mat; antenna as in Fig. D, all flagellar segments more than three times as long as high, the longest bristles of the basal segments much longer than the scape. Mesoscutum very finely rugulose and dull, rather thickly covered with short hair; scutellum unusually strongly convex, finely rugulose and dull, hairy; propodeum and metapleuron densely covered with long, silky hairs.

Black; antennae brownish yellow; wings hyaline; subcostal vein yellow; legs brownish yellow, including all coxae except anterior pair which are a little infuscated basally.

Female.—Essentially as in the male except for the antennae (Fig. C). Club of antenna brown.

Type locality.—Sao Paulo, Brazil.

Type.—U. S. National Museum No. 62213.

Host.—*Pseudococcus* sp. on *Moquiela tomentosa*.

Described from 47 males and 17 females reared by H. L. Parker and Paul A. Berry in 1945. Several specimens of both sexes, which I consider the same species, are recorded as reared by Parker and Berry from *Pseudococcus* sp. on *Annona* in 1945 at

Campo Grande, Brazil. They are not, however, included in the type series.

Allotropia merrilli n. sp.

This species is so similar to *ashmeadi* Mues. that it is not easily distinguished even in the male sex. The antennae and legs are darker, however; the mesoscutum is more strongly sculptured and not so shining, and the scutellum is more convex.

Male.—Length about 0.75 mm. Head as wide as thorax; face shining, delicately coriaceous except for a small median area that is smooth and polished; vertex coriaceous and mat; antenna as in Fig. B, the longer dorsal setae arranged in small clusters and about

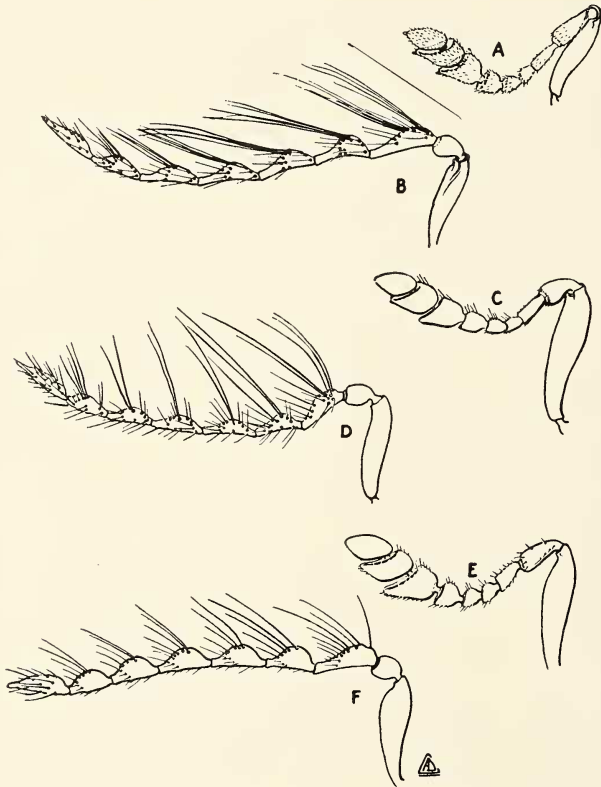


Fig. 1. Antennae: A, female of *Allotropia merrilli*, B, male of same; C, female of *Allotropia scutellata*, D, male of same; E, female of *Allotropia citri*, F, male of same.

as long as the basal three flagellar segments combined. Mesoscutum closely, finely shagreened and mat; scutellum very large, evenly convex, a little less strongly sculptured than mesoscutum and somewhat shining.

Black; antenna brownish yellow, scape piceous above; wings hyaline, subcostal vein dark brown; legs piceous, the anterior and middle pairs weakly so.

Female.—Antenna as in Fig. A; sculpture similar in character to that of male but a little stronger; antennae and legs dark brown.

Type locality.—Melrose, Florida.

Type.—U. S. National Museum No. 62214.

Host.—*Trionymus* sp. on bald cypress.

Described from 3 males and 5 females reared by G. B. Merrill May 21, 1943. Other specimens reared from an unknown mealybug on cypress at New Orleans, Louisiana, are the same species, in my opinion, but are not included in the type series.

A simple technique for improving and accelerating KOH clearing of insects.—Quite by accident some years ago I discovered that it is possible to take advantage of the difference in boiling points between 5 or 10% KOH and ethyl alcohol in clearing insects of their internal organs. Whereas the standard recommendation of rolling the KOH-loosened contents out of an insect with a camel's hair brush is often difficult, time consuming and damaging, the technique outlined below is simple, quick, and particularly advantageous with delicate insects or structures.

The technique consists first of treating the specimen in KOH but only until the internal organs are completely loosened, not completely dissolved. Then the specimen is placed in alcohol and ventilated for a few seconds by squeezing the specimen lightly a few times. (Or it can be permeated with alcohol simply by leaving it in the alcohol for a minute or two.)

Finally the specimen is dropped back into hot KOH. The alcohol within it immediately boils and simply, quickly, and without damage carries out all loose particles (through a previously prepared hole in the integument).—J. F. HANSON, Amherst, Mass.